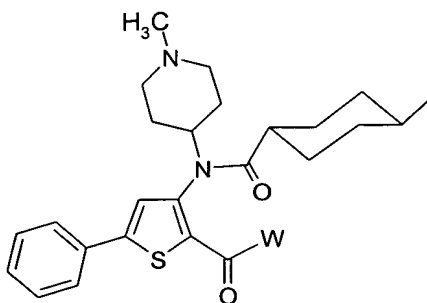


This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A compound represented by formula I:

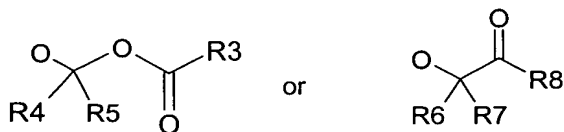


(I)

or pharmaceutically acceptable salts thereof;

wherein;

W is C₁₋₁₂ alkyloxy, C₆₋₁₂ arylalkyloxy, amino acid ester, nucleoside, C₆₋₁₂ heteroaralkyloxy, C₆ aryloxy, 5-6 membered heteroaryloxy,



R₃ and R₈ are each independently chosen from C₁₋₁₂ alkyl, C₆₋₁₀ aryl, C₆₋₁₀ arylalkyl, C₃₋₁₀ heterocycle, C₃₋₁₂ heteroaralkyl, C₆₋₁₂ aralkyl, C₁₋₁₂ alkyloxy, C₆₋₁₀ aryloxy or NR₁₀R₁₁ wherein

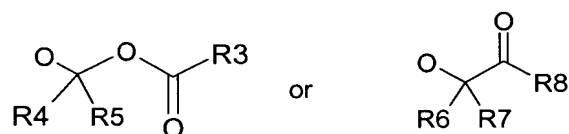
R₁₀ and R₁₁ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₂ aryl, C₃₋₁₀ heterocycle, C₆₋₁₂ aralkyl or C₃₋₁₀ heteroaralkyl.

R₄ and R₅ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₀ aryl, -O(CO)C₁₋₆ alkyl

or C₃₋₁₀ heterocycle;

R₆ and R₇ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₀ aryl, -O(CO)C₁₋₆ alkyl or C₃₋₁₀ heterocycle.

2. (Original) A compound of claim 1, wherein W is C₁₋₁₂ alkyloxy, amino acid ester,



3. (Original) A compound of claim 1, wherein, R₃ and R₈ are each independently chosen from C₁₋₁₂ alkyl, C₆₋₁₀ aryl, C₆₋₁₀ arylalkyl, C₃₋₁₀ heterocycle, C₃₋₁₂ heteroaralkyl, C₆₋₁₂ aralkyl, C₁₋₁₂ alkyloxy, C₆₋₁₀ aryloxy or NR₁₀R₁₁ wherein R₁₀ and R₁₁ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₂ aryl, C₃₋₁₀ heterocycle, C₆₋₁₂ aralkyl or C₃₋₁₀ heteroaralkyl.
4. (Original) A compound of claim 1, wherein R₄ and R₅ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₀ aryl, -O(CO)C₁₋₆ alkyl or C₃₋₁₀ heterocycle.
5. (Original) A compound of claim 1, wherein R₄ and R₅ are taken together to form a 3-6 membered cycloalkyl.
6. (Original) A compound of claim 1, wherein R₆ and R₇ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₀ aryl, -O(CO)C₁₋₆ alkyl or C₃₋₁₀ heterocycle;
7. (Original) A compound of claim 1, wherein R₆ and R₇ are taken together to form a 3-6 membered cycloalkyl.
8. (Original) A compound of claim 1, wherein R₁₀ and R₁₁ are each independently chosen from H, C₁₋₁₂ alkyl, C₃₋₁₀ heterocycle.

9. (Original) A compound selected from:

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-
5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2,2-DIMETHYL-
PROPIONYLOXYMETHY;

4-[(2-ISOPROPOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-
3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-
PIPERIDINIUM; CHLORIDE

4-[(2-ISOPROPYLCARBAMOYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-
3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM
CHLORIDE;

1-METHYL-4- {(4-METHYL-CYCLOHEXANECARBONYL)-[2-(5-METHYL-2-OXO-
[1,3]DIOXOL-4-YLMETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-AMINO}-
PIPERIDINIUM;

4-[[2-(1-ISOPROPOXYCARBONYLOXY-ETHOXYCARBONYL)-5-PHENYL-
THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-
PIPERIDINIUM CHLORIDE;

4-[{2-[1-(2,2-DIMETHYL-PROPIONYLOXY)-ETHOXYCARBONYL]-5-PHENYL-
THIOPHEN-3-YL}-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-
PIPERIDINIUM CHLORIDE;

4-[[2-(ISOPROPOXYCARBONYLOXY-PHENYL-METHOXYCARBONYL)-5-PHENYL-
THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-
PIPERIDINIUM CHLORIDE;

4-[(2-CYCLOHEXYLOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-
THIOPHEN-3-YL)-
(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM
CHLORIDE;

4-[{2-[(2,2-DIMETHYL-PROPIONYLOXY)-PHENYL-METHOXYCARBONYL]-5-
PHENYL-THIOPHEN-3-YL}-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-

METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(5-PHENYL-2-PROPIONYLOXYMETHOXYCARBONYL-THIOPHEN-3-YL)-AMINO]-PIPERIDINIUM CHLORIDE;

4-[[2-(FURAN-2-CARBONYLOXYMETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-BENZOYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-CYCLOHEXANECARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(5-PHENYL-2-SUCCINYL-17(3-TERT-BUTOXYCARBONYLMETHYL-CARBAMOYL)-METHYL-PROPYL)-7,12-DIHYDROXY-10,13-DIMETHYL-HEXADECAHYDRO-CYCLOPENTA(A)PHENANTHREN-3-YLOXYMETHOXYCARBONYL-THIOPHEN-3-YL)AMINO]-PIPERIDINIUM CHLORIDE;

METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(5-PHENYL-2-SUCCINYL-17(3-CARBONYLMETHYL-CARBAMOYL)-METHYL-PROPYL)-7,12-DIHYDROXY-10, 13-DIMETHYL-HEXADECAHYDRO-CYCLOPENTA(A)PHENANTHREN-3-YLOXYMETHOXYCARBONYL-THIOPHEN-3-YL)AMINO]-PIPERIDINIUM CHLORIDE;

4-[(2-ETHOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(2-PHENOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-AMINO]-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-[2-(MORPHOLINE-4-CARBONYLOXYMETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-AMINO]-PIPERIDINIUM CHLORIDE;

4-[[2-[1-(2,2-DIMETHYL-PROPIONYLOXY)-2-METHYL-PROPOXYCARBONYL]-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-SEC-BUTOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[[2-(1-ISOPROPOXYCARBONYLOXY-2-METHYL-PROPOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-SEC-BUTOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM; CHLORIDE;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID TERT-BUTOXYCARBONYLAMINOACETOXYMETHYL ESTER;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2-TERT-BUTOXYCARBONYLAMINO-3-METHYL-BUTYRYLOXYMETHYL ESTER;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID AMINOACETOXYMETHYL ESTER, BIS TRIFLUOROACETATE SALT;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2-AMINO-3-METHYL-BUTYRYLOXYMETHYL ESTER, BIS TRIFLUOROACETATE SALT;

4-[[2-(1-ISOPROPOXYCARBONYLOXY-1-METHYL-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-

METHYL-PIPERIDINIUM CHLORIDE;
 3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-
 5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 1-(1-METHYL-
 CYCLOHEXANECARBONYLOXY)-ETHYL ESTER;
 4-[[2-(1-TERT-BUTOXYCARBONYLOXY-ETHOXYCARBONYL)-5-PHENYL-
 THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-
 PIPERIDINIUM CHLORIDE;
 1-METHYL-4-((4-METHYL-CYCLOHEXANECARBONYL)-{2-[1-(1-METHYL-
 CYCLOHEXANECARBONYLOXY)-ETHOXYCARBONYL]-5-PHENYL-THIOPHEN-3-
 YL}-AMINO)-PIPERIDINIUM;
 PYRROLIDINE-1,2-DICARBOXYLIC ACID 1-TERT-BUTYL ESTER 2-{3-[(4-METHYL-
 CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-
 THIOPHENE-2-CARBONYLOXYMETHYL} ESTER;
 4-Methyl-piperazine-1-carboxylic acid 3-[(4-methyl-cyclohexanecarbonyl)-(1-methyl-
 piperidin-4-yl)-amino]-5-phenyl-thiophene-2-carbonyloxymethyl ester dihydrochloride salt;
 4-[[2-(1-CYCLOHEXYLOXYCARBONYLOXY-ETHOXYCARBONYL)-5-PHENYL-
 THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-
 PIPERIDINIUM; CHLORIDE;
 2-{3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-
 AMINO]-5-PHENYL-THIOPHENE-2-CARBONYLOXYMETHOXYCARBONYL}-
 PYRROLIDINIUM; BIS-TRIFLUORO-ACETATE;
 4-[[2-(1-ISOBUTYRYLOXY-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-
 METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM;
 CHLORIDE;
 3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-
 5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID PYRIDIN-2-YL ESTER;
 4-[[2-(1-ACETOXY-1-METHYL-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-
 (4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM
 CHLORIDE;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2-OXO-PYRROLIDIN-1-YLMETHYL ESTER;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(2-PHENOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-AMINO]-PIPERIDINIUM CHLORIDE;

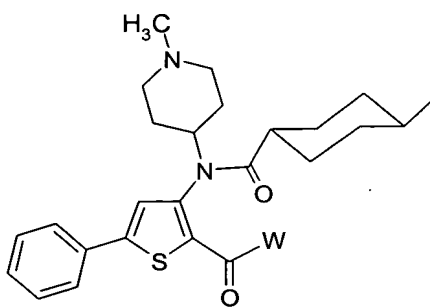
1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-[5-PHENYL-2-(PYRIDIN-3-YLOXYCARBONYL)-THIOPHEN-3-YL]-AMINO]-PIPERIDINIUM; CHLORIDE;

4-[2-[1-(4-HYDROXY-5-HYDROXYMETHYL-TETRAHYDRO-FURAN-2-YL)-2-OXO-1,2-DIHYDRO-PYRIMIDIN-4-YLCARBAMOYL]-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[[2-(1-METHOXYCARBONYL-2-METHYL-PROPYLCARBAMOYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[[2-(1-METHOXYCARBONYL-ETHYLCARBAMOYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM; or pharmaceutically acceptable salts thereof.

10. (Original) A method for treating or preventing a Flaviviridae viral infection in a host comprising administering to the host a therapeutically effective amount of at least one compound of formula I:

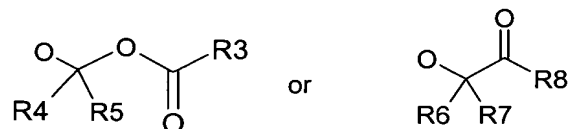


(I)

or pharmaceutically acceptable salts thereof;

wherein;

W is C₁₋₁₂ alkyloxy, C₆₋₁₂ arylalkyloxy, amino acid ester, nucleoside, C₆₋₁₂ heteroaralkyloxy, C₆ aryloxy, 5-6 membered heteroaryloxy,



R₃ and R₈ are each independently chosen from C₁₋₁₂ alkyl, C₆₋₁₀ aryl, C₆₋₁₀ arylalkyl, C₃₋₁₀ heterocycle, C₃₋₁₂ heteroaralkyl, C₆₋₁₂ aralkyl, C₁₋₁₂ alkyloxy, C₆₋₁₀ aryloxy or NR₁₀R₁₁ wherein

R₁₀ and R₁₁ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₂ aryl, C₃₋₁₀ heterocycle, C₆₋₁₂ aralkyl or C₃₋₁₀ heteroaralkyl;

R₄ and R₅ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₀ aryl, -O(CO)C₁₋₆ alkyl or C₃₋₁₀ heterocycle;

R₆ and R₇ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₀ aryl, -O(CO)C₁₋₆ alkyl or C₃₋₁₀ heterocycle.

11. (Original) A method of claim 10, further comprising administering at least one additional agent chosen from viral serine protease inhibitor, viral polymerase inhibitor, viral helicase inhibitor, immunomodulating agent, antioxydant agent, antibacterial agent, therapeutic vaccine, hepatoprotectant agent or antisense agent.
12. (Original) A method of claim 11, wherein the additional agent is interferon α , ribavirin, silybum marianum, interleukine-12, amantadine, ribozyme, thymosin, N-acetyl cysteine or cyclosporin.

13. (Currently Amended) A method according to claim 10 ~~any of claims 10 to 12~~, wherein the Flaviviridea viral infection is hepatitis C viral infection (HCV).
14. (Original) A method for treating or preventing a Flaviviridae viral infection in a host comprising administering to the host a therapeutically effective amount of at least one compound selected from:
- 3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2,2-DIMETHYL-PROPIONYLOXYMETHY;
- 4-[(2-ISOPROPOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM; CHLORIDE
- 4-[(2-ISOPROPYLCARBAMOYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;
- 1-METHYL-4- {(4-METHYL-CYCLOHEXANECARBONYL)-[2-(5-METHYL-2-OXO-[1,3]DIOXOL-4-YLMETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-AMINO}-PIPERIDINIUM;
- 4-[[2-(1-ISOPROPOXYCARBONYLOXY-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;
- 4-[{2-[1-(2,2-DIMETHYL-PROPIONYLOXY)-ETHOXYCARBONYL]-5-PHENYL-THIOPHEN-3-YL} -(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;
- 4-[[2-(ISOPROPOXYCARBONYLOXY-PHENYL-METHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;
- 4-[(2-CYCLOHEXYLOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-

(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[{2-[(2,2-DIMETHYL-PROPIONYLOXY)-PHENYL-METHOXYCARBONYL]-5-PHENYL-THIOPHEN-3-YL}-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(5-PHENYL-2-PROPIONYLOXYMETHOXYCARBONYL-THIOPHEN-3-YL)-AMINO]-PIPERIDINIUM CHLORIDE;

4-[[2-(FURAN-2-CARBONYLOXYMETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-BENZOYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-CYCLOHEXANECARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(5-PHENYL-2-SUCCINYL-17(3-TERT-BUTOXYCARBONYLMETHYL-CARBAMOYL)-METHYL-PROPYL)-7,12-DIHYDROXY-10,13-DIMETHYL-HEXADECAHYDRO-CYCLOPENTA(A)PHENANTHREN-3-YLOXYMETHOXYCARBONYL-THIOPHEN-3-YL)AMINO]-PIPERIDINIUM CHLORIDE;

METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(5-PHENYL-2-SUCCINYL-17(3-CARBONYLMETHYL-CARBAMOYL)-METHYL-PROPYL)-7,12-DIHYDROXY-10,13-DIMETHYL-HEXADECAHYDRO-CYCLOPENTA(A)PHENANTHREN-3-YLOXYMETHOXYCARBONYL-THIOPHEN-3-YL)AMINO]-PIPERIDINIUM CHLORIDE;

4-[(2-ETHOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(2-PHENOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-AMINO]-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-[2-(MORPHOLINE-4-CARBONYLOXYMETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-AMINO]-PIPERIDINIUM CHLORIDE;

4-[{2-[1-(2,2-DIMETHYL-PROPIONYLOXY)-2-METHYL-PROPOXYCARBONYL]-5-PHENYL-THIOPHEN-3-YL}-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-SEC-BUTOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[[2-(1-ISOPROPOXYCARBONYLOXY-2-METHYL-PROPOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-SEC-BUTOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM; CHLORIDE;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID TERT-BUTOXYCARBONYLAMINOACETOXYMETHYL ESTER;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2-TERT-BUTOXYCARBONYLAMINO-3-METHYL-BUTYRYLOXYMETHYL ESTER;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID AMINOACETOXYMETHYL ESTER, BIS TRIFLUOROACETATE SALT;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2-AMINO-3-METHYL-

BUTYRYLOXYMETHYL ESTER, BIS TRIFLUOROACETATE SALT;
 4-[[2-(1-ISOPROPOXYCARBONYLOXY-1-METHYL-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;
 3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 1-(1-METHYL-CYCLOHEXANECARBONYLOXY)-ETHYL ESTER;
 4-[[2-(1-TERT-BUTOXYCARBONYLOXY-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;
 1-METHYL-4-((4-METHYL-CYCLOHEXANECARBONYL)-{2-[1-(1-METHYL-CYCLOHEXANECARBONYLOXY)-ETHOXYCARBONYL]-5-PHENYL-THIOPHEN-3-YL}-AMINO)-PIPERIDINIUM;
 PYRROLIDINE-1,2-DICARBOXYLIC ACID 1-TERT-BUTYL ESTER 2-{3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBONYLOXYMETHYL} ESTER;
 4-Methyl-piperazine-1-carboxylic acid 3-[(4-methyl-cyclohexanecarbonyl)-(1-methyl-piperidin-4-yl)-amino]-5-phenyl-thiophene-2-carbonyloxymethyl ester dihydrochloride salt;
 4-[[2-(1-CYCLOHEXYLOXYCARBONYLOXY-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM; CHLORIDE;
 2-{3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBONYLOXYMETHOXYCARBONYL}-PYRROLIDINIUM; BIS-TRIFLUORO-ACETATE;
 4-[[2-(1-ISOBUTYRYLOXY-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM; CHLORIDE;
 3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID PYRIDIN-2-YL ESTER;

4-[[2-(1-ACETOXY-1-METHYL-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-
(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM
CHLORIDE;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-
5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2-OXO-PYRROLIDIN-1-YLMETHYL
ESTER;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(2-PHENOXYCARBONYL-
5-PHENYL-THIOPHEN-3-YL)-AMINO]-PIPERIDINIUM CHLORIDE;

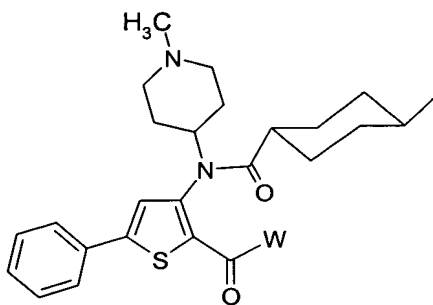
1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-[5-PHENYL-2-(PYRIDIN-3-
YLOXYCARBONYL)-THIOPHEN-3-YL]-AMINO]-PIPERIDINIUM; CHLORIDE;

4-[[2-[1-(4-HYDROXY-5-HYDROXYMETHYL-TETRAHYDRO-FURAN-2-YL)-2-OXO-
1,2-DIHYDRO-PYRIMIDIN-4-YLCARBAMOYL]-5-PHENYL-THIOPHEN-3-YL]-(4-
METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM
CHLORIDE;

4-[[2-(1-METHOXYCARBONYL-2-METHYL-PROPYLCARBAMOYL)-5-PHENYL-
THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-
PIPERIDINIUM CHLORIDE;

4-[[2-(1-METHOXYCARBONYL-ETHYLCARBAMOYL)-5-PHENYL-THIOPHEN-3-YL]-
(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM;
or pharmaceutically acceptable salts thereof.

15. (Original) A pharmaceutical composition comprising at least one compound of
formula I:

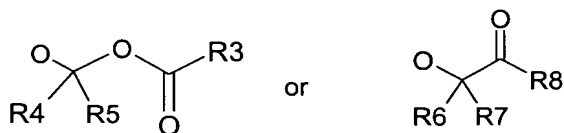


(I)

or pharmaceutically acceptable salts thereof;

wherein;

W is C₁₋₁₂ alkyloxy, C₆₋₁₂ arylalkyloxy, amino acid ester, nucleoside, C₆₋₁₂ heteroarylalkyloxy, C₆ aryloxy, 5-6 membered heteroaryloxy,



R₃ and R₈ are each independently chosen from C₁₋₁₂ alkyl, C₆₋₁₀ aryl, C₆₋₁₀ arylalkyl, C₃₋₁₀ heterocycle, C₃₋₁₂ heteroarylalkyl, C₆₋₁₂ aralkyl, C₁₋₁₂ alkyloxy, C₆₋₁₀ aryloxy or NR₁₀R₁₁ wherein

R₁₀ and R₁₁ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₂ aryl, C₃₋₁₀ heterocycle, C₆₋₁₂ aralkyl or C₃₋₁₀ heteroarylalkyl;

R₄ and R₅ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₀ aryl, -O(CO)C₁₋₆ alkyl or C₃₋₁₀ heterocycle;

R₆ and R₇ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₀ aryl, -O(CO)C₁₋₆ alkyl or C₃₋₁₀ heterocycle;

and at least one pharmaceutically acceptable carrier or excipient.

16. (Original) A pharmaceutical composition according to claim 15, further comprising at least one additional agent chosen from viral serine protease inhibitor, viral polymerase inhibitor, viral helicase inhibitor, immunomodulating agent, antioxidant agent, antibacterial agent, therapeutic vaccine, hepatoprotectant agent or antisense agent.
17. (Original) A pharmaceutical composition of claim 16, wherein the additional agent is interferon α , ribavirin, silybum marianum, interleukine-12, amantadine, ribozyme, thymosin, N-acetyl cysteine or cyclosporin.
18. (Original) A pharmaceutical composition comprising at least one compound selected from:

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2,2-DIMETHYL-PROPIONYLOXYMETHY;

4-[(2-ISOPROPOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM; CHLORIDE

4-[(2-ISOPROPYLCARBAMOYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-[2-(5-METHYL-2-OXO-[1,3]DIOXOL-4-YLMETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-AMINO]-PIPERIDINIUM;

4-[[2-(1-ISOPROPOXYCARBONYLOXY-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[{2-[1-(2,2-DIMETHYL-PROPIONYLOXY)-ETHOXYCARBONYL]-5-PHENYL-THIOPHEN-3-YL}-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[[2-(ISOPROPOXYCARBONYLOXY-PHENYL-METHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-CYCLOHEXYLOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[{2-[(2,2-DIMETHYL-PROPIONYLOXY)-PHENYL-METHOXYCARBONYL]-5-PHENYL-THIOPHEN-3-YL}-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(5-PHENYL-2-PROPIONYLOXYMETHOXYCARBONYL-THIOPHEN-3-YL)-AMINO]-PIPERIDINIUM CHLORIDE;

4-[[2-(FURAN-2-CARBONYLOXYMETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-BENZOYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-CYCLOHEXANECARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(5-PHENYL-2-SUCCINYL-17(3-TERT-BUTOXYCARBONYLMETHYL-CARBAMOYL)-METHYL-PROPYL)-7,12-DIHYDROXY-10,13-DIMETHYL-HEXADECAHYDRO-CYCLOPENTA(A)PHENANTHREN-3-YLOXYMETHOXYCARBONYL-THIOPHEN-3-YL)AMINO]-PIPERIDINIUM CHLORIDE;

METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(5-PHENYL-2-SUCCINYL-17(3-CARBONYLMETHYL-CARBAMOYL)-METHYL-PROPYL)-7,12-DIHYDROXY-

10,13-DIMETHYL-HEXADECAHYDRO-CYCLOPENTA(A)PHENANTHREN-3-YLOY METHOXYCARBONYL-THIOPHEN-3-YL)AMINO-PIPERIDINIUM CHLORIDE;
4-[(2-ETHOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;
1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(2-PHENOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-AMINO]-PIPERIDINIUM CHLORIDE;
1-METHYL-4-{(4-METHYL-CYCLOHEXANECARBONYL)-[2-(MORPHOLINE-4-CARBONYLOXYMETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-AMINO}-PIPERIDINIUM CHLORIDE;
4-[{2-[1-(2,2-DIMETHYL-PROPIONYLOXY)-2-METHYL-PROPOXYCARBONYL]-5-PHENYL-THIOPHEN-3-YL}-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;
4-[(2-SEC-BUTOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;
4-[[2-(1-ISOPROPOXYCARBONYLOXY-2-METHYL-PROPOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;
4-[(2-SEC-BUTOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM; CHLORIDE;
3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID TERT-BUTOXYCARBONYLAMINOACETOXYMETHYL ESTER;
3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2-TERT-BUTOXYCARBONYLAMINO-3-METHYL-BUTYRYLOXYMETHYL ESTER;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID AMINOACETOXYMETHYL ESTER, BIS TRIFLUOROACETATE SALT;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2-AMINO-3-METHYLBUTYRYLOXYMETHYL ESTER, BIS TRIFLUOROACETATE SALT;

4-[[2-(1-ISOPROPOXYCARBONYLOXY-1-METHYL-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 1-(1-METHYL-CYCLOHEXANECARBONYLOXY)-ETHYL ESTER;

4-[[2-(1-TERT-BUTOXYCARBONYLOXY-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-((4-METHYL-CYCLOHEXANECARBONYL)-{2-[1-(1-METHYL-CYCLOHEXANECARBONYLOXY)-ETHOXYCARBONYL]-5-PHENYL-THIOPHEN-3-YL}-AMINO)-PIPERIDINIUM;

PYRROLIDINE-1,2-DICARBOXYLIC ACID 1-TERT-BUTYL ESTER 2-{3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBONYLOXYMETHYL} ESTER;

4-Methyl-piperazine-1-carboxylic acid 3-[(4-methyl-cyclohexanecarbonyl)-(1-methyl-piperidin-4-yl)-amino]-5-phenyl-thiophene-2-carbonyloxymethyl ester dihydrochloride salt;

4-[[2-(1-CYCLOHEXYLOXYCARBONYLOXY-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM; CHLORIDE;

2-{3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBONYLOXYMETHOXYCARBONYL}-PYRROLIDINIUM; BIS-TRIFLUORO-ACETATE;

4-[[2-(1-ISOBUTYRYLOXY-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM;
CHLORIDE;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID PYRIDIN-2-YL ESTER;

4-[[2-(1-ACETOXY-1-METHYL-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM
CHLORIDE;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2-OXO-PYRROLIDIN-1-YLMETHYL
ESTER;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(2-PHENOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-AMINO]-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-[5-PHENYL-2-(PYRIDIN-3-YLOXYCARBONYL)-THIOPHEN-3-YL]-AMINO]-PIPERIDINIUM; CHLORIDE;

4-[{2-[1-(4-HYDROXY-5-HYDROXYMETHYL-TETRAHYDRO-FURAN-2-YL)-2-OXO-1,2-DIHYDRO-PYRIMIDIN-4-YLCARBAMOYL]-5-PHENYL-THIOPHEN-3-YL}-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM
CHLORIDE;

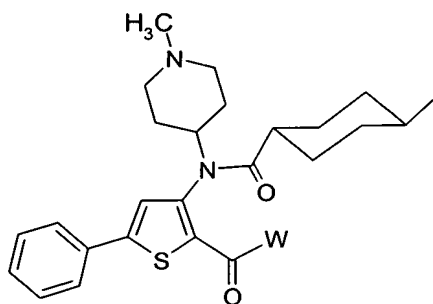
4-[[2-(1-METHOXYCARBONYL-2-METHYL-PROPYLCARBAMOYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[[2-(1-METHOXYCARBONYL-ETHYLCARBAMOYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM;

or pharmaceutically acceptable salts thereof;

and at least one pharmaceutically acceptable carrier or excipient.

19. (Original) A method for inhibiting or reducing the activity of viral polymerase in a host comprising administering to the host a therapeutically effective amount of at least one compound of formula I:

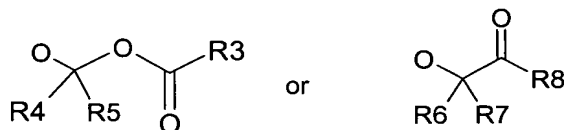


(I)

or pharmaceutically acceptable salts thereof;

wherein;

W is C₁₋₁₂ alkyloxy, C₆₋₁₂ arylalkyloxy, amino acid ester, nucleoside, C₆₋₁₂ heteroarylalkyloxy, C₆ aryloxy, 5-6 membered heteroaryloxy,



R₃ and R₈ are each independently chosen from C₁₋₁₂ alkyl, C₆₋₁₀ aryl, C₆₋₁₀ arylalkyl, C₃₋₁₀ heterocycle, C₃₋₁₂ heteroarylalkyl, C₆₋₁₂ aralkyl, C₁₋₁₂ alkyloxy, C₆₋₁₀ aryloxy or NR₁₀R₁₁ wherein

R₁₀ and R₁₁ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₂ aryl, C₃₋₁₀ heterocycle, C₆₋₁₂ aralkyl or C₃₋₁₀ heteroarylalkyl;

R₄ and R₅ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₀ aryl, -O(CO)C₁₋₆ alkyl or C₃₋₁₀ heterocycle;

R₆ and R₇ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₀ aryl, -O(CO)C₁₋₆ alkyl or C₃₋₁₀ heterocycle and at least one pharmaceutically acceptable carrier or excipient.

20. (Original) A method of claim 19, wherein viral polymerase is a Flaviviridae viral polymerase.

21. (Original) A method for inhibiting or reducing the activity of viral polymerase in a host comprising administering a therapeutically effective amount of at least one compound selected from:

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2,2-DIMETHYL-PROPIONYLOXYMETHY;

4-[(2-ISOPROPOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM; CHLORIDE

4-[(2-ISOPROPYLCARBAMOYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-[2-(5-METHYL-2-OXO-[1,3]DIOXOL-4-YLMETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-AMINO]-PIPERIDINIUM;

4-[[2-(1-ISOPROPOXYCARBONYLOXY-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[[2-[1-(2,2-DIMETHYL-PROPIONYLOXY)-ETHOXYCARBONYL]-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[[2-(ISOPROPOXYCARBONYLOXY-PHENYL-METHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-

PIPERIDINIUM CHLORIDE;

4-[(2-CYCLOHEXYLOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-

(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[{2-[(2,2-DIMETHYL-PROPIONYLOXY)-PHENYL-METHOXYCARBONYL]-5-PHENYL-THIOPHEN-3-YL}-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(5-PHENYL-2-PROPIONYLOXYMETHOXYCARBONYL-THIOPHEN-3-YL)-AMINO]-PIPERIDINIUM CHLORIDE;

4-[[2-(FURAN-2-CARBONYLOXYMETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-BENZOYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-CYCLOHEXANECARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(5-PHENYL-2-SUCCINYL-17(3-TERT-BUTOXYCARBONYLMETHYL-CARBAMOYL)-METHYL-PROPYL)-7,12-DIHYDROXY-10,13-DIMETHYL-HEXADECAHYDRO-CYCLOPENTA(A)PHENANTHREN-3-YLOXYMETHOXYCARBONYL-THIOPHEN-3-YL)AMINO]-PIPERIDINIUM CHLORIDE;

METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(5-PHENYL-2-SUCCINYL-17(3-CARBONYLMETHYL-CARBAMOYL)-METHYL-PROPYL)-7,12-DIHYDROXY-10,13-DIMETHYL-HEXADECAHYDRO-CYCLOPENTA(A)PHENANTHREN-3-YLOXYMETHOXYCARBONYL-THIOPHEN-3-YL)AMINO]-PIPERIDINIUM CHLORIDE;

4-[(2-ETHOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-
(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM
CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(2-
PHENOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-
AMINO]-PIPERIDINIUM CHLORIDE;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-[2-(MORPHOLINE-4-
CARBONYLOXYMETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-AMINO]-
PIPERIDINIUM CHLORIDE;

4-[{2-[1-(2,2-DIMETHYL-PROPIONYLOXY)-2-METHYL-PROPOXYCARBONYL]-5-
PHENYL-THIOPHEN-3-YL}-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-
METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-SEC-BUTOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-
3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM
CHLORIDE;

4-[[2-(1-ISOPROPOXYCARBONYLOXY-2-METHYL-PROPOXYCARBONYL)-5-
PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-
METHYL-PIPERIDINIUM CHLORIDE;

4-[(2-SEC-BUTOXYCARBONYLOXYMETHOXYCARBONYL-5-PHENYL-THIOPHEN-
3-YL)-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-
PIPERIDINIUM; CHLORIDE;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-
AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID TERT-
BUTOXYCARBONYLAMINOACETOXYMETHYL ESTER;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-
5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2-TERT-
BUTOXYCARBONYLAMINO-3-METHYL-BUTYRYLOXYMETHYL ESTER;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-
5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID AMINOACETOXYMETHYL ESTER ,

BIS TRIFLUOROACETATE SALT;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2-AMINO-3-METHYLBUTYRYLOXYMETHYL ESTER, BIS TRIFLUOROACETATE SALT;

4-[[2-(1-ISOPROPOXYCARBONYLOXY-1-METHYL-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 1-(1-METHYLCYCLOHEXANECARBONYLOXY)-ETHYL ESTER;

4-[[2-(1-#TERT!-BUTOXYCARBONYLOXY-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

1-METHYL-4-((4-METHYL-CYCLOHEXANECARBONYL)-{2-[1-(1-METHYLCYCLOHEXANECARBONYLOXY)-ETHOXYCARBONYL]-5-PHENYL-THIOPHEN-3-YL}-AMINO)-PIPERIDINIUM;

PYRROLIDINE-1,2-DICARBOXYLIC ACID 1-TERT-BUTYL ESTER 2-{3-[(4-METHYLCYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBONYLOXYMETHYL} ESTER;

4-Methyl-piperazine-1-carboxylic acid 3-[(4-methyl-cyclohexanecarbonyl)-(1-methyl-piperidin-4-yl)-amino]-5-phenyl-thiophene-2-carbonyloxymethyl ester dihydrochloride salt;

4-[[2-(1-CYCLOHEXYLOXYCARBONYLOXY-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM; CHLORIDE;

2-{3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBONYLOXYMETHOXYCARBONYL}-PYRROLIDINIUM; BIS-TRIFLUORO-ACETATE;

4-[[2-(1-ISOBUTYRYLOXY-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM;

CHLORIDE;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID PYRIDIN-2-YL ESTER;

4-[[2-(1-ACETOXY-1-METHYL-ETHOXYCARBONYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

3-[(4-METHYL-CYCLOHEXANECARBONYL)-(1-METHYL-PIPERIDIN-4-YL)-AMINO]-5-PHENYL-THIOPHENE-2-CARBOXYLIC ACID 2-OXO-PYRROLIDIN-1-YLMETHYL ESTER;

1-METHYL-4-[(4-METHYL-CYCLOHEXANECARBONYL)-(2-PHENOXYCARBONYL-5-PHENYL-THIOPHEN-3-YL)-AMINO]-PIPERIDINIUM CHLORIDE;

1-METHYL-4-{(4-METHYL-CYCLOHEXANECARBONYL)-[5-PHENYL-2-(PYRIDIN-3-YLOXYCARBONYL)-THIOPHEN-3-YL]-AMINO}-PIPERIDINIUM; CHLORIDE;

4-[[2-[1-(4-HYDROXY-5-HYDROXYMETHYL-TETRAHYDRO-FURAN-2-YL)-2-OXO-1,2-DIHYDRO-PYRIMIDIN-4-YLCARBAMOYL]-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[[2-(1-METHOXYCARBONYL-2-METHYL-PROPYLCARBAMOYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM CHLORIDE;

4-[[2-(1-METHOXYCARBONYL-ETHYLCARBAMOYL)-5-PHENYL-THIOPHEN-3-YL]-(4-METHYL-CYCLOHEXANECARBONYL)-AMINO]-1-METHYL-PIPERIDINIUM;
or pharmaceutically acceptable salts thereof.

22. (Original) A combination comprising a least one compound of formula I:



wherein;

R4C1(OR5)OC(=O)R3 or R6C1(OR7)C(=O)R8

R₁₀ and R₁₁ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₂ aryl, C₃₋₁₀ heterocycle, C₆₋₁₂ aralkyl or C₃₋₁₀ heteroaralkyl;

R₄ and R₅ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₀ aryl, -O(CO)C₁₋₆ alkyl or C₃₋₁₀ heterocycle;

R₆ and R₇ are each independently chosen from H, C₁₋₁₂ alkyl, C₆₋₁₀ aryl, -O(CO)C₁₋₆ alkyl or C₃₋₁₀ heterocycle;

and one or more additional agent chosen from viral serine protease inhibitor, viral polymerase inhibitor and viral helicase inhibitor, immunomodulating agent, antioxydant agent, antibacterial agent, therapeutic vaccine, hepatoprotectant agent or antisense agent.